



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/614,898	07/12/2000	Clark Woody	J 2850	2434

28165 7590 05/19/2003

S.C. JOHNSON & SON, INC.
1525 HOWE STREET
RACINE, WI 53403-2236

EXAMINER

WEEKS, GLORIA R

ART UNIT

PAPER NUMBER

3721

DATE MAILED: 05/19/2003

15

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/614,898

Applicant(s)

WOODY ET AL.

Examiner

Gloria R Weeks

Art Unit

3721

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 7, 8, 11-18, 21-24, 26-30 and 33-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7, 8, 11-18, 21-24, 26-30 and 33-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED OFFICE ACTION

Response to Amendment

1. This action is in response to Applicants' amendment received on May 7, 2003.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-2, 8-10, 15-16, and 23 are rejected under 35 U.S.C. 103(a) as being anticipated by Coleman et al. (USPN 5, 546,732) in view of Gorlich et al. (USPN 6,305,149).

In reference to claims 1, Coleman et al. discloses a method of severing and sealing a plurality of layers of film (28, 30, 34; column 5, lines 13-15) formed of a thermoplastic material (column 3, lines 28-30) comprising the steps of: heating a cutting edge implement (121) to a temperature sufficient to sever and seal a plurality of layers of the film (28, 30, 34); feeding a plurality of layers of (28, 30, 34; column 5, lines 13-15) of the film between the heated cutting edge implement (121) and an opposing surface (122); moving the heated cutting edge implement (121) and the opposing surface (122) relative to one another to pinch the plurality of layers of film therebetween (column 5, lines 21-25); and thereafter, suspending any relative lateral movement between the cutting edge implement (121), the plurality of layers of film (28, 30, 34), and the opposing surface (122), while relatively biasing the heated cutting edge implement (121) and the opposing surface (122) together with the plurality of layers of film (28, 30, 34) pinched there between, until the cutting edge implement (121) cuts through the plurality of layers of film (28, 30,

Art Unit: 3721

34), contacts the opposing surface (122), and seals the plurality of layers of the film together (column 5, lines 25-28). Coleman et al. does not disclose the temperature range of which the heated cutting implement is heated. Gorlich et al. teaches a method of severing and sealing a thermoplastic film (column 9, lines 58-60) using a heated cutting edge implement (304; column 8, lines 58-67; column 9, lines 1-3) heated to a temperature between 600°F-900°F. Gorlich clearly teaches that the temperature to which the cutting edge implement is heated depends on the characteristics of the film used (column 8, lines 62-64). Therefore, it would have been obvious to one having ordinary skill in the art of sealing and cutting at the time the invention was made to heat the cutting edge implement of Coleman et al. within the temperature range taught by Gorlich et al. for the purpose creating a clean cut and seal in the film (Gorlich et al.-column 10, lines 12-20).

Regarding claim 2, the modified method of Coleman et al. in view of Gorlich et al. discloses a method of severing and sealing a film formed of a thermoplastic material wherein the moving step comprises the step of advancing the heated cutting edge implement (Coleman et al.-121; Gorlich et al.-304) in a direction substantially perpendicular relative to a contact area of the opposing surface (Coleman et al.-122; figures 15-16; column 5, lines 21-25).

Regarding claims 9-10, and 19-20, the modified method of Coleman et al in view of Gorlich et al. discloses a method of severing and sealing a film formed of a thermoplastic material wherein the heating step comprises heating the cutting edge implement, but Coleman et al. does not disclose the temperature range in which the cutting edge is heated.

Regarding claim 8, Coleman et al. discloses a method of severing and sealing a plurality of layers of film (28, 30, 34) comprising the steps of: heating a cutting edge implement (121) to a temperature sufficient to sever and seal a plurality of layers of thermoplastic material (column 5, lines 15-16); feeding a plurality of layers of (28, 30, 34; column 5, lines 13-15) of the film between

Art Unit: 3721

the heated cutting edge implement (121) and an opposing surface (122); moving the heated cutting edge implement (121) and the opposing surface (122) relative to one another to pinch the plurality of layers of film therebetween (column 5, lines 21-25); and relatively biasing the heated cutting edge implement (121) and the opposing surface (118a; figure 15) relative to one another to pinch the plurality of layer of the film (28, 30, 34) therebetween, until the heated cutting edge implement (122) severs the plurality of layers of film (column 5, lines 13-28). Gorlich et al. teaches a method of severing and sealing a thermoplastic film (column 9, lines 58-60) using a heated cutting edge implement (304; column 8, lines 58-67; column 9, lines 1-3) heated to a temperature between 600°F-900°F. Gorlich clearly teaches that the temperature to which the cutting edge implement is heated depends on the characteristics of the film used (column 8, lines 62-64). Therefore, it would have been obvious to one having ordinary skill in the art of sealing and cutting at the time the invention was made to heat the cutting edge implement of Coleman et al. within the temperature range taught by Gorlich et al. for the purpose creating a clean cut and seal in the film (Gorlich et al.-column 10, lines 12-20).

With respect to claim 15, Coleman et al. discloses an apparatus for severing and sealing a plurality of layers of film (28, 30, 34) formed of a thermoplastic material (column 3, lines 28-30) comprising: a cutting edge implement (121) that is heated to a temperature sufficient to sever and seal the thermoplastic material (column 5, lines 15-16); an anvil (122); means for feeding a plurality of layers of (28, 30, 34; column 5, lines 13-15) between the heated cutting edge (121) and the anvil (122); means for moving the heated cutting edge implement (121) and the anvil (122) relative to one another to pinch the plurality of layers of film (28, 30, 34) there between (column 5, lines 21-25); and means for suspending any relative lateral movement between the heated cutting edge implement (121), the layers of film (28, 30, 34), and the anvil (121), while pressing the cutting edge

Art Unit: 3721

implement (121) toward the anvil (122) with the layers of film (28, 30, 34) pinched there between, until the cutting edge implement (121) melts through the plurality of layers of film (28, 30, 34), contacts the anvil (122), and seals the plurality of layers of film together (figures 15-16; column 5, lines 25-26). Coleman et al. does not disclose the temperature range of which the heated cutting implement is heated. Gorlich et al. teaches a method of severing and sealing a thermoplastic film (column 9, lines 58-60) using a heated cutting edge implement (304; column 8, lines 58-67; column 9, lines 1-3) heated to a temperature between 600°F-900°F. Gorlich clearly teaches that the temperature to which the cutting edge implement is heated depends on the characteristics of the film used (column 8, lines 62-64). Therefore, it would have been obvious to one having ordinary skill in the art of sealing and cutting at the time the invention was made to heat the cutting edge implement of Coleman et al. within the temperature range taught by Gorlich et al. for the purpose creating a clean cut and seal in the film (Gorlich et al.-column 10, lines 12-20).

In reference to claim 16 and its limitations as stated above, Coleman et al. discloses an apparatus for severing and sealing a film formed of a thermoplastic material further comprising: means (120) for laterally moving the heated cutting edge implement (121) along a closed path; and means for moving the anvil (122) along a path that is at least in part substantially parallel to a portion of the closed path traveled by the heated cutting edge implement (121; figures 15-16).

With respect claim 23, Coleman et al. discloses a method for severing and sealing a plurality of layers of film (28, 30, 34) formed of a thermoplastic material (column 3, lines 28-30) comprising the steps of: heating a cutting edge implement to a temperature sufficient to sever and seal the thermoplastic material (column 5, lines 15-16), pinching the plurality of layers of the film (28, 30, 34) between a substrate (122) and the heated cutting edge implement (121); and pressing the cutting edge (121) implement toward the substrate (122) with the plurality of layers of film pinched there

Art Unit: 3721

between, until the heated cutting edge implement (121) melts through the plurality of layers film, contacts the substrate, and seals the plurality of layers of film together (figures 15-16; column 5, lines 25-26). Coleman et al. does not disclose the temperature range of which the heated cutting implement is heated. Gorlich et al. teaches a method of severing and sealing a thermoplastic film (column 9, lines 58-60) using a heated cutting edge implement (304; column 8, lines 58-67; column 9, lines 1-3) heated to a temperature between 600°F-900°F. Gorlich clearly teaches that the temperature to which the cutting edge implement is heated depends on the characteristics of the film used (column 8, lines 62-64). Therefore, it would have been obvious to one having ordinary skill in the art of sealing and cutting at the time the invention was made to heat the cutting edge implement of Coleman et al. within the temperature range taught by Gorlich et al. for the purpose creating a clean cut and seal in the film (Gorlich et al.-column 10, lines 12-20).

4. Claims 3, 7, 17 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coleman et al. (USPN 5, 546,732) as applied to claims 1, 16 and 23 above, and further in view of Motomura (USPN 6,260,336).

With respect claims 3, 7, 17, 24 and their limitations as stated above, Coleman et al. discloses a method of severing and sealing a film formed of a thermoplastic material wherein the suspending step comprises synchronously moving the heated cutting edge implement (121), the film (28, 30, 34), and the opposing surface (122), but does not disclose synchronously moving the cutting edge implement (121), the film (28, 30, 34), and the opposing surface (122) in substantially the same lateral direction. Motomura teaches a method of severing and sealing a film by pinching the film between a heated cutting edge implement (35, 36) and an opposing surface (31a, 32a) wherein the suspending step comprises synchronously moving the cutting edge implement (35, 36), the film (11), and the opposing surface (31a, 32a) in substantially the same lateral direction (figure

Art Unit: 3721

2, lines 5, lines 40-49). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Coleman et al. to include the step of synchronously moving the cutting edge implement, opposing surface and film in the same lateral direction, as taught by Motomura for the purpose of continuously feeding the film during the dwell time of the cutting edge implement and the opposing surface with the film.

5. Claims 27, 30, 33 and 35 are rejected under 35 U.S.C. 102(b) as being anticipated by Wildmoser (USPN 4,115,182) in view of Gorlich et al. (USPN 6,305,149).

Regarding claim 27, Wildmoser discloses an apparatus for severing and sealing a plurality of layers of film (18a, 20a; figure 1) formed of a thermoplastic material comprising: a cutting edge implement (40) that is heatable to a temperature sufficient to melt but not to burn the thermoplastic material; an insulating insert (38) for supporting the cutting edge implement (40); a base member (34) for supporting the insulating insert; an anvil (52) for placement adjacent to the cutting edge implement (40) on a side of the cutting edge implement (40) opposite from the insulating insert (38) and the base member (34); means for feeding a plurality of layers of the film (18a, 20a) between the cutting edge implement (40) and the anvil (52); means for moving the cutting edge implement (40) and the anvil (52) relative to one another to pinch the plurality of layers of film (18a, 20a) therebetween; means for suspending any relative lateral movement between the cutting edge implement (40), the film (18a, 20a), and the anvil (52), while pressing the cutting edge implement (40) toward the anvil (52) with the film (18a, 20a) pinched therebetween, until the cutting edge implement (40) melts through the plurality of layers of film (18a, 20a), contacts the anvil (52), and seals the plurality of layers of film (18a, 20a) together (column 4, lines 4-14, 38-41, 64-68; column 5, lines 1-35). Wildmoser does not disclose the temperature range of which the heated cutting implement is heated taught. It would have been obvious to one having ordinary skills in the art of

Art Unit: 3721

severing and sealing to modify the apparatus of Coleman et al. to include a plurality of layers of film since

Gorlich et al. teaches a method of severing and sealing a thermoplastic film (column 9, lines 58-60) using a heated cutting edge implement (304; column 8, lines 58-67; column 9, lines 1-3) heated to a temperature between 600°F-900°F. Gorlich clearly teaches that the temperature to which the cutting edge implement is heated depends on the characteristics of the film used (column 8, lines 62-64). Therefore, it would have been obvious to one having ordinary skill in the art of sealing and cutting at the time the invention was made to heat the cutting edge implement of Wildmoser within the temperature range taught by Gorlich et al. for the purpose creating a clean cut and seal in the film (Gorlich et al.-column 10, lines 12-20).

Regarding claim 30, the modified apparatus of Wildmoser in view of Gorlich et al. discloses an apparatus for severing and sealing a film wherein the heated cutting edge implement (Wildmoser-40) is a hot wire that is supported substantially its entire effective cutting length by the insulating insert (Wildmoser-38; column 4, lines 7-11).

Regarding claim 33, the modified apparatus of Wildmoser in view of Gorlich et al. discloses an apparatus for severing and sealing a film wherein the cutting edge implement (Wildmoser-40) comprises a hot wire (Wildmoser-column 4, lines 7-11).

In reference to claim 35 and its limitations as stated above, Wildmoser discloses an apparatus for severing and sealing a film wherein the insulating insert (38) is made of rubber (column 4, lines 4-7). Gorlich et al. teaches the use of ceramic for the purpose of providing insulation against the transfer of heat (column 9, lines 26-30). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the

Art Unit: 3721

rubber insulating insert and anvil of Wildmoser to include ceramic, as taught by Gorlich et al., for the purpose of reducing or preventing the transfer of heat from the cutting edge implement

6. Claims 4, 11, 18 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coleman et al. (USPN 5, 546,732) in view of Gorlich et al. (USPN 6,305,149) as applied to claims 1, 15 and 23 above, and further in view of Noel et al. (USPN 5, 718,101).

In reference to claims 4, 11, 18, 26 and their limitations as stated above, Coleman et al. discloses a method of severing and sealing a plurality of layers of film (28, 30, 34) formed of a thermoplastic material wherein the cutting edge implement (121) is a hot blade, not a hot wire, and further comprising the step of prior to the moving step, supporting the hot blade for substantially its entire effective cutting length (figure 16). Noel et al. teaches that it is well known in the art to substitute a blade for wire for the purpose of severing and sealing (column 6, lines 31-33). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the cutting edge implement of Coleman et al. to include the a hot wire, as taught in the method of Noel et al.

7. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Coleman et al. (USPN 5, 546,732) in view of Gorlich et al. (USPN 6,305,149) as applied to claim 8 above, and further in view of Dworak et al. (USPN 5,094,657).

Regarding claim 12 and its limitations and its limitations as stated above, Coleman et al. discloses a method of severing and sealing a film formed of a thermoplastic material including the step of pinching film between a heated cutting edge implement (121) and another surface (122; figure 15), but does not disclose the amount of time that this step occurs. Dworak et al. teaches the method of severing and sealing a film wherein the cutting edge pinches film between another surface for approximately one second (column 4, lines 42-60). It would have been obvious to one

Art Unit: 3721

having ordinary skill in the art at the time the invention was made to further modify the method of Coleman to include the step of pinching the film between the cutting edge implement and another surface for approximately one second, as taught by Dworak et al.

8. Claims 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wildmoser (USPN 4,115,182) in view of Gorlich et al. (USPN 6,305,149) as applied to claim 27, and further in view of Motomura (USPN 6,260,336).

With respect to claim 28 and its limitations as stated above, Wildmoser discloses an apparatus for severing and sealing a film further comprising: means for longitudinally moving the heated cutting edge implement (40) along a closed path, but does not disclose means for laterally moving the heated cutting edge implement (40). Motomura teaches an apparatus of severing and sealing a film by pinching the film between a heated cutting edge implement (35, 36) and an anvil (31a, 32a); including means for moving the cutting edge implement (35, 36) and the anvil (31a, 32a) in a lateral direction on a closed path, while keeping the cutting edge implement (35, 36) and the anvil (31a, 32a) substantially parallel (figure 2, lines 5, lines 40-49). It would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the apparatus of Wildmoser to include the lateral moving means of Motomura for the purpose of continuously feeding the film during the process of sealing the layers of film between the cutting edge implement and the anvil.

In reference to claim 29 and its limitations as stated above, Wildmoser discloses an apparatus for severing and sealing a film wherein the cutting edge implement (40) and the anvil (52) move synchronously in a longitudinal direction, towards each other, but does not disclose the cutting edge implement (40), the film (18a, 20a), and the anvil (52) all moving synchronously in the same lateral direction while the film is being melted and sealed. Motomura teaches an apparatus of

Art Unit: 3721

severing and sealing a film by pinching the film (11) between a heated cutting edge implement (35, 36) and an anvil (31a, 32a); including means for moving the cutting edge implement (35, 36), the film (11), and the anvil (31a, 32a) in a lateral direction on a closed path, while keeping the cutting edge implement (35, 36) and the anvil (31a, 32a) substantially parallel (figure 2, lines 5, lines 40-49). It would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the apparatus of Wildmoser to include the lateral moving means of Motomura for the purpose of continuously feeding the film during the process of sealing the layers of film between the cutting edge implement and the anvil.

9. Claims 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wildmoser (USPN 4,115,182).

With respect to claim 34 and its limitations as stated above, Wildmoser discloses an apparatus for severing and sealing a film while suspending any lateral movement of the film (18a, 20a) during the process of sealing and cutting the film (18a, 20a). Although the amount of time the lateral movement of the film is not disclosed, it would have been an obvious matter of design choice to suspend the lateral movement of the film for approximately one second, since applicant has not disclosed that this amount of time solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with if the film was suspended for an amount of time relatively greater or less than one second.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Refer to attachment for notice of references cited and recommended for consideration.


Art Unit: 3721

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gloria R Weeks whose telephone number is (703) 605-4211. The examiner can normally be reached on 6:30 am - 5:00 pm Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rinaldi I Rada can be reached on (703) 305-2187. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7769 for regular communications and (703) 308-7769 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-1789.

Gloria R Weeks
Examiner
Art Unit 3721


grw
May 15, 2003



Rinaldi I. Rada
Supervisory Patent Examiner
Group 3700